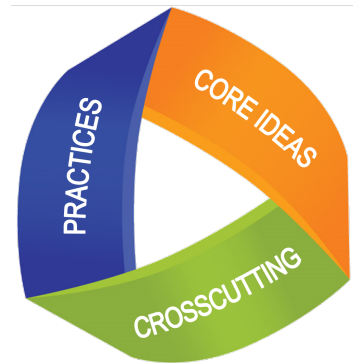


# Next Generation Science Standards

The National Research Council's (NRC) [\*Framework\*](#) describes a vision of what it means to be proficient in science; it rests on a view of science as both a body of knowledge and an evidence-based, model and theory building enterprise that continually extends, refines, and revises knowledge. It presents three dimensions that will be combined to form each standard:



## **Dimension 1: Practices**

The practices describe behaviors that scientists engage in as they investigate and build models and theories about the natural world and the key set of engineering practices that engineers use as they design and build models and systems.

1. Asking questions (for science) and defining problems (for engineering)
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations (for science) and designing solutions (for engineering)
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

## **Dimension 2: Crosscutting Concepts**

Crosscutting concepts have application across all domains of science. As such, they are a way of linking the different domains of science. They include: Patterns, similarity, and diversity; Cause and effect; Scale, proportion and quantity; Systems and system models; Energy and matter; Structure and function; Stability and change. The Framework emphasizes that these concepts need to be made explicit for students because they provide an organizational schema for interrelating knowledge from various science fields into a coherent and scientifically-based view of the world.

## **Dimension 3: Disciplinary Core Ideas**

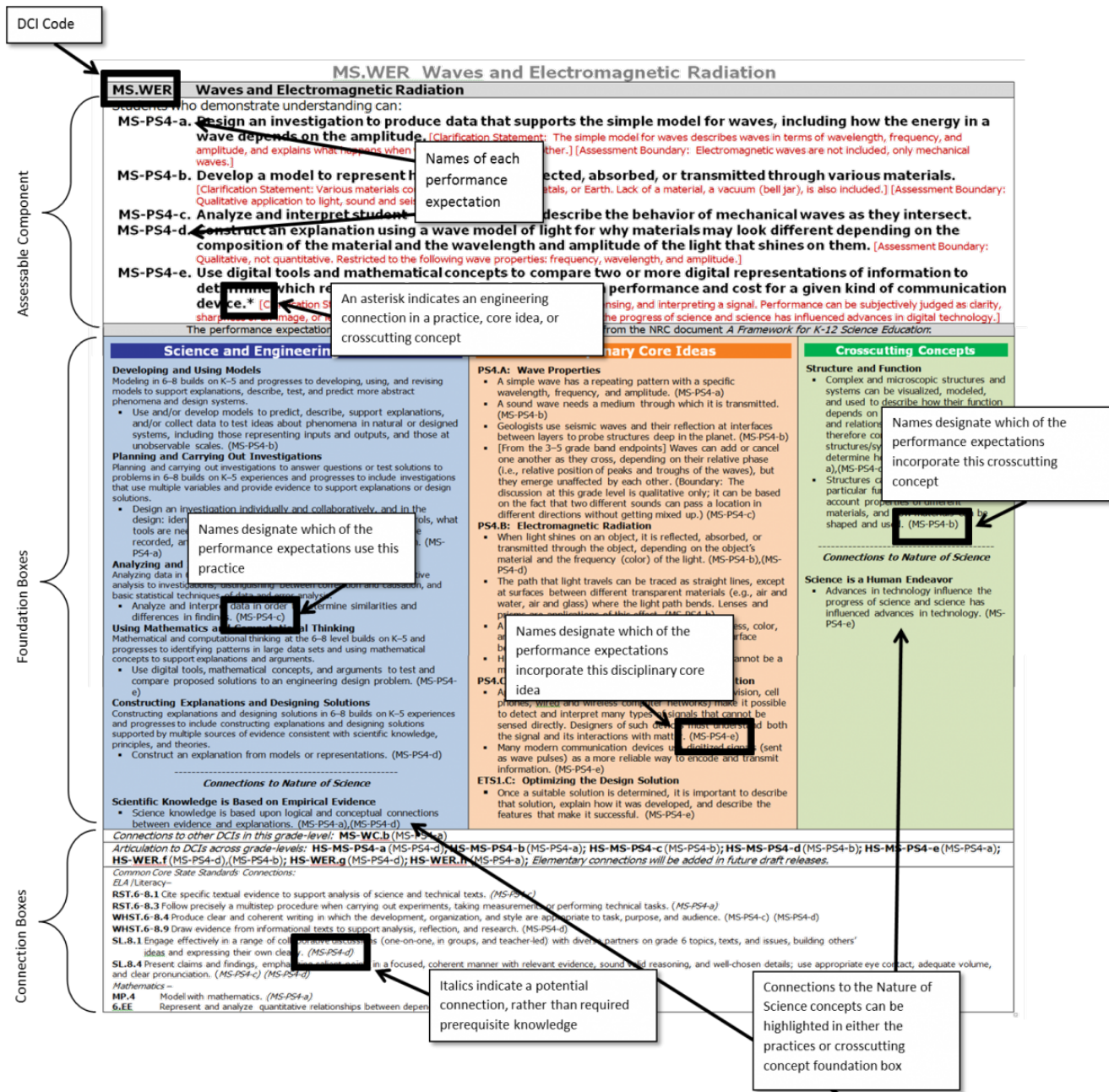
Disciplinary core ideas have the power to focus K–12 science curriculum, instruction and assessments on the most important aspects of science.

Disciplinary core ideas are grouped in four domains:

- the [physical sciences](#);
- the [life sciences](#);
- the [earth and space sciences](#); and
- [engineering, technology and applications of science](#).

Read more about the three dimensions in the NRC *Framework* online [here](#).

# Next Generation Science Standards



Source: <http://www.nextgenscience.org/how-to-read-the-standards>

Adapted from: <http://www.nextgenscience.org/three-dimensions>